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EXAMINER	
YANG, CLARA I	

ART UNIT	PAPER NUMBER
2635	16

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/424,685	TAMORI, TERUHIKO	
	Examiner	Art Unit	
	Clara Yang	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6,7,9,10,13,18-20,22-25 and 27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6,7,9,10,13,18,19,25 and 27* is/are rejected.

7)☒ Claim(s) *20 and 22-24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 January 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☒ Interview Summary (PTO-413) Paper No(s). *16*.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 12 November 2003 with respect to claims 1 - 3, 6, 7, 9, 10, 13, 25, and 27 have been considered but are moot in view of the new ground(s) of rejection.

2. Applicant's arguments filed on 12 November 2003, with respect to claims 9, 10, and 19 (see the last paragraph on page 12 and the first paragraph on page 13) have been fully considered and are persuasive. The 35 U.S.C. 112, first paragraph rejection of claims 9, 10, and 19 has been withdrawn. In addition, the applicant's arguments with respect to claims 20 and 22 - 24 have been fully considered and are persuasive. The 35 U.S.C. 103(a) rejection of claims 20 and 22 - 24 has been withdrawn.

3. Applicant's arguments filed on 12 November 2003 with respect to claims 18 (see the first paragraph on page 13) and 25 have been fully considered but they are not persuasive.

In the previous Office Action (paper no. 13), claim 18 was rejected under 35 U.S.C. 112, first paragraph for containing new matter in addition for being dependent on claim 9. Consequently, the 35 U.S.C. 112, first paragraph rejection of claim 18 is maintained.

Regarding claim 25, on page 22 the applicant argues that "Scott et al. merely teaches the transmission of a fingerprint *image* rather than *fingerprint minutiae data*" and that fingerprint minutiae data is "data concerning a pattern comprising ridges and valleys". Though Scott teaches a fingerprint reader that scans a fingerprint (see Col. 2, lines 11 - 16; Col. 3, lines 38 - 43; and Col. 4, lines 28 - 41), one of ordinary skill in the art recognizes that in a fingerprint matching system using a finger platen, prism, or other optical elements, the detection of fingerprint minutiae depends on sensing the differences in internal reflection of a light source between the areas of the face of the optical element in contact with the

fingerprint ridges and the areas of the face of the optical element not in contact with the fingerprint ridges. Furthermore, a fingerprint, as illustrated in Fig. 2 of Exhibit A that was submitted by the applicant, is formed by ridges, branch points, and end points. Consequently, Scott's fingerprint image inherently contains fingerprint minutiae data that is coded and then transmitted to a receiver.

Allowable Subject Matter

4. Claims 20 and 22 - 24 would be allowable if rewritten or amended to correct the informalities cited in the objections. The prior art of record fails to teach or suggest a method having the steps of: (a) an authorized user registering his/her fingerprint data in the memory of a portable read/write (R/W) device; (b) the authorized user pressing his/her finger on the portable R/W device's fingerprint sensor; (c) the portable R/W device placing itself in condition for accessing data from an information recording/processing device if the authorized user's fingerprint matches the registered fingerprint data stored in memory; (d) the authorized user connecting a second person's information device to the portable R/W device; (e) the portable R/W device reading identification and fingerprint data from the second person's information device; (f) the second person pressing his/her finger on the portable R/W device's fingerprint sensor; and (g) the portable R/W device comparing the second person's fingerprint with the one read from the second person's information device.

Claim Objections

5. Claim 20 is objected to because of the following informalities: Change "read/write/device" to "read/write device". Appropriate correction is required.

Specification

6. The disclosure is objected to because of the following informalities:

- Page 1: Change "Technical Filed" to "Technical Field".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The limitation "user-specific information is fingerprint data from a person who has authority to inspect or rewrite information in the information recording/processing device" is considered to be new matter. Claim 18 is dependent on claim 9, which recites a *machine/system control device*. While describing the machine/system control device at the bottom of page 12 through page 17, the Applicant omits teaching that (1) user-specific information is fingerprint data and (2) that the fingerprint data must be from "a person who has authority to inspect or rewrite information" in remote controller 3 or the information recording/processing device. In fact, the Applicant differentiates between fingerprint data and user-specific information. On page 14, the Applicant imparts that "name, sex, age, license number, category of the license, upper speed limit, etc." are examples of user-specific information and are stored in personal information memory 43, whereas fingerprint data is stored in fingerprint register memory 41. Consequently, the Examiner interprets "user-specific information" to be "personal

characteristics". Furthermore, the Applicant only specifies that the fingerprint register memory 41 stores fingerprints of authorized drivers, not "a person who has authority to inspect or rewrite information in the information recording/processing device."

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

10. Claims 1 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said memory" in the last line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "the information recording/processing device" in the last line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 1 - 3, 13, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,559,504 (Itsumi et al.) in view of U.S. Patent No. 6,628,810 (Harkin).

Referring to Claims 1 - 3, and 27, Itsumi teaches an integrated circuit (IC) card 63 (see Figs. 24 - 26) having: (a) a fingerprint sensor 61 (see Col. 14, lines 62 - 64 and Col. 15, lines 2 - 13); (b) calculation unit 71 and signal processing unit 72 for converting fingerprint data detected

by fingerprint input unit 70 into digital signals (see Col. 15, lines 24 - 27); (c) external terminal 76 for electrically connected IC card 63 with an external terminal (see Col. 15, lines 16 - 20 and 32 - 36); (d) fingerprint data registration memory 74; and (e) central processing unit (CPU) 77 or fingerprint matching unit for comparing input fingerprint data with the registered fingerprint data and generating a signal to set external terminal 76 in an operable state when the input fingerprint data matches the registered fingerprint data (see Col. 15, lines 28 - 36). Itsumi's method for verifying an individual comprises the steps of: (a) registering fingerprint data in IC card 63's fingerprint data registration memory 74 in advance (see Col. 15, lines 28 - 30); (b) electrodes 61 and fingerprint input unit 70 sensing a fingerprint of an individual (see Col. 15, lines 9 - 13 and 24 - 26); (c) CPU 77 comparing the sensed fingerprint to the registered fingerprint (see Col. 15, lines 28 - 32); and (d) CPU 77 setting external terminal 76 in the operable state via a signal when the input fingerprint data matches the registered fingerprint data (see Col. 15, lines 32 - 36). Itsumi, however, omits teaching that electrodes 61 has a plurality of scanning electrode lines arranged in an X-direction and a plurality of scanning electrode lines arranged in a Y-direction with an active element connected to the X and Y scanning electrode lines at each intersection.

In an analogous art, Harkin teaches a biometric characteristics sensing device that can be incorporated in a smart card (see Col. 3, lines 1 - 6 and Col. 8, lines 33 - 36). Referring to Figs. 2 and 4, Harkin's sensing device comprises a sensing element array having row address conductors 18 (i.e., "X scanning electrode lines") and column address conductors 20 (i.e., "Y scanning electrode lines"). Row address conductors 18 and column address conductors 20 are each connected at an intersection by a sensing element 12 (see Col. 5, lines 13 - 19) and 24 - 31). Per Harkin, the sensing element array has a high-resolution region 14 for sensing fingerprint

patterns and a low-resolution region 15 for sensing other, generally large, hand biometric characteristics such as finger length and/or width (see Col. 4, lines 55 - 67 and Col. 5, lines 1 - 3). Harkin discloses that the capacitances of electrodes 17 in region 14 depend on the spacing of the immediately overlying finger's ridges and troughs (see Col. 5, lines 36 - 42).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Itsumi's electrodes 61 as taught by Harkin because Harkin's fingerprint sensor device is able to sense different hand biometric characteristics while using only a single sensing element array, thus simplifying manufacture while reducing the overall effective error rate and improving security (see Harkin, Col. 2, lines 9 - 30).

Regarding Claim 13, Itsumi's IC card 63 has information recording memory 75for storing information specific to the user, such as his/her banking information (see Col. 15, lines 32 - 36).

13. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,565,000 (Sehr) in view of U.S. Patent No. 6,628,810 (Harkin) and U.S. Patent No. 5,559,504 (Itsumi et al.).

Referring to Claim 6, Sehr teaches a passenger card 11 or portable information recording unit that comprises database storage means, processing and communications capabilities, and display means (see Col. 6, lines 27 - 29). Sehr imparts that a passenger can use biometric box 13 of card station 1 (as shown in Fig. 1) to capture and digitize his/her biometric information, such as fingerprint, and use card reader 12 to write the captured biometric information to card 11 (see Col. 6, lines 45 - 67), thus implying that card 11 has at least a first memory unit for storing fingerprint data detected by biometrics box 13. Furthermore, as shown in Fig. 3, Sehr discloses the contents stored in card 11, which include the passenger's name, address, birth date, etc. (see

Col. 14, lines 24 - 31). Here it is understood that a second memory unit stores the passenger-specific information. Sehr also teaches multiple control modules or information processing units (see Fig. 1, card station 1). Card station 1 comprises: (a) card reader/writer 12 for interfacing with card 11 (see Col. 6, lines 45 - 50); (b) biometrics box 13 for capturing and digitizing fingerprints, voice, signature, etc. (see Col. 6, lines 58 - 67); (c) biometrics matching unit configured to compare newly detected fingerprint or signature data received at biometrics box 13 with the registered fingerprint or signature data stored on card 11 (see Col. 13, lines 9 - 16 and see Col. 34, lines 32 - 35); (d) database 10 or third memory unit for storing biometrics data captured and digitized by biometrics box 13 (see Col. 6, lines 61 - 63); and (e) a display (see Col. 6, lines 48 - 50). Here it is understood that biometrics box 13 includes a thin fingerprint sensor. Sehr's card 11 lacks (1) a thin a pressure-based fingerprint sensor having a plurality of scanning electrode lines arranged in an X-direction and a plurality of scanning electrode lines arranged in a Y-direction with an active element connected to the X and Y scanning electrode lines at each intersection, and (2) an exposed terminal configured for connecting with a control module's card reader/writer 12. In addition, Sehr omits teaching that card reader/writer 12 has an external terminal configured for connecting with the external terminal of card 11.

In an analogous art, Itsumi's IC card 63 or portable information recording unit, as shown in Fig. 26, comprises: (a) fingerprint input unit 70 or thin fingerprint sensor; (b) fingerprint data registration memory 74; (c) information recording memory 75, which is understood to be a memory for storing user-specific information; and (d) external terminal 76 for inputting and outputting information from and to an external terminal of an information processing unit, such as a banking system or the like. (See Col. 15, lines 14 - 36). Itsumi teaches that the information processing unit has an external terminal for exchanging information with IC card 63 via external

terminal 76 of IC card 63 (see Col. 15, lines 32 - 36). Itsumi, however, fail to teach that fingerprint input unit 70 is a thin a pressure-based fingerprint sensor having a plurality of scanning electrode lines arranged in an X-direction and a plurality of scanning electrode lines arranged in a Y-direction with an active element connected to the X and Y scanning electrode lines at each intersection.

In an analogous art, Harkin teaches a biometric characteristics sensing device that can be incorporated in a smart card (see Col. 3, lines 1 - 6 and Col. 8, lines 33 - 36). Referring to Figs. 2 and 4, Harkin's sensing device comprises a sensing element array having row address conductors 18 (i.e., "X scanning electrode lines") and column address conductors 20 (i.e., "Y scanning electrode lines"). Row address conductors 18 and column address conductors 20 are each connected at an intersection by a sensing element 12 (see Col. 5, lines 13 - 19) and 24 - 31). Per Harkin, the sensing element array has a high-resolution region 14 for sensing fingerprint patterns and a low-resolution region 15 for sensing other, generally large, hand biometric characteristics such as finger length and/or width (see Col. 4, lines 55 - 67 and Col. 5, lines 1 - 3). Harkin discloses that the capacitances of electrodes 17 in region 14 depend on the spacing of the immediately overlying finger's ridges and troughs (see Col. 5, lines 36 - 42).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Itsumi's fingerprint input unit 70 as taught by Harkin because Harkin's fingerprint sensor device is able to sense different hand biometric characteristics while using only a single sensing element array, thus simplifying manufacture while reducing the overall effective error rate and improving security (see Harkin, Col. 2, lines 9 - 30).

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify card 11 and card reader/writer 12 of Sehr as taught by Itsumi and Harkin because (1) external terminals are effective and well-known means for connecting devices, and (2) a self-authenticating card 11 determines that the person who currently inputs the fingerprint is the lawful bearer before card 11 is rendered operable (see Itsumi, Col. 15, lines 28 - 36), thus preventing unlawful use of the card and enhancing system security.

Regarding Claim 7, by using card reader/writer 12 of card station 1, a passenger can read from, write to, and rewrite information stored on card 11 (see Col. 6, lines 45 - 57; Col. 13, lines 43 - 56; and Col. 14, lines 55 - 51).

14. Claims 9, 10, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,225,890 (Murphy) in view of U.S. Patent No. 5,172,785 (Takahashi).

Referring to Claims 9 and 10, Murphy's vehicle control system, as shown in Fig. 7, comprises: (a) biometric indicium receiving and analysis mechanism (BIRAM) 203, which receives a fingerprint from a vehicle operator (see Col. 4, lines 39 - 52; Col. 13, lines 33 - 41; and Col. 15, lines 11 - 15); (b) controller 209 or fingerprint matching unit for matching the presented fingerprint with the identities and registered fingerprint data of one or more authorized drivers (see Col. 13, lines 36 - 41 and Col. 15, lines 15 - 21); (c) a memory unit within controller 209 for containing a database of the identities and registered fingerprint data (see Col. 15, lines 15 - 21 and 66 - 67;and Col. 16, lines 1 - 11); and (d) token receiving and analysis mechanism (TRAM) 205 for receiving a token or smart card presented by a would-be driver (see Col.6, lines 55 - 62; Col. 7, lines 1 - 14; Col. 14, lines 46 - 54; and Col. 15, lines 11 - 15 and 60 - 65). Murphy discloses that a data transfer module 221 is used to add additional people to the database of

authorized drivers and that each authorized driver periodically re-enters a fingerprint sample into the system in order to compensate for the tendency of biometric indicium to change with the passage of time (see Col. 6, lines 49 - 54 and Col. 15, lines 55 - 65), thus implying that fingerprint data stored in controller 209's memory unit is associated with updateable user-specific information. Murphy also teaches that controller 209 determines if any control action(s), such as reducing vehicle speed to a selected speed range, are to be imposed on vehicle based on user-specific information corresponding to the presented fingerprint (see Col. 5, lines 29 - 54; Col. 15, lines 21 - 31 and 37 - 42; and Col. 17, lines 3 - 13). Murphy's controller 209, however, is unable to automatically control operation of the vehicle based simply on personal characteristics, such as age. In other words, Murphy teaches that in order for control 209 to determine which control actions, if any, to impose on the vehicle, such control actions must first be associated with each authorized driver.

In an analogous art, Takahashi teaches a vehicle control system that is adjustable based on a driver's age and driving characteristics (see Abstract). As shown in Fig. 14, which is a schematic view of Takahashi's accelerator control system, Takahashi's system comprises: (a) card reader 8 for receiving integrated circuit (IC) card 8a; and (b) driver's accelerating characteristic estimator 35 or control mechanism for controlling operation of a vehicle based on the driver's age read from IC card 8a and inputs from components 8 -11 and 26 (see Col. 10, lines 64 - 68 and Col. 11, lines 1 - 23). Per Takahashi, the controlling mechanism produces a vehicle control signal according to a predetermined control characteristic, estimates a driver's characteristic from a signal supplied from the sensing means (i.e., components 8 - 11 and 26), and adjusts the control characteristic in accordance with the driver's age (see Col. 2, lines 6 - 25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Murphy's system as taught by Takahashi because a controller 209 that is able to automatically control operation of the vehicle based on personal characteristics enhances safety and ensures proper vehicle control performance particularly for the aged (see Takahashi, Col. 1, lines 33 - 49).

Regarding Claim 18, as mentioned above in Claim 9, Murphy teaches that controller 209 determines if any control action(s), such as reducing vehicle speed to a selected speed range, are to be imposed on vehicle based on user-specific information corresponding to the presented fingerprint (see Col. 5, lines 29 - 54; Col. 15, lines 21 - 31 and 37 - 42; and Col. 17, lines 3 - 13). Per Murphy, each authorized driver is categorized in one or more of the following classes if applicable: (a) very young drivers; (b) very old drivers; (c) physically or mentally impaired drivers; and (d) drivers with restricted licenses (see Col. 17, lines 3 - 13). Here it is understood that such classes represent personal characteristics. Because Murphy imparts that a smart card or token contains information specific for a person and is encoded information in order to minimize or eliminate the possibility that an unauthorized person could read and modify the smart card (see Col. 7, lines 1 - 14), it is also understood that Murphy's smart card can be read and updated by an authorized person.

15. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,225,890 (Murphy) in view of U.S. Patent No. 5,172,785 (Takahashi) as applied to claim 9 above, and further in view of U.S. Patent No. 6,628,810 (Harkin).

Murphy and Takahashi fail to teach that BIRAM 203 has a thin a pressure-based fingerprint sensor having a plurality of scanning electrode lines arranged in an X-direction and

a plurality of scanning electrode lines arranged in a Y-direction with an active element connected to the X and Y scanning electrode lines at each intersection.

In an analogous art, Harkin teaches a biometric characteristics sensing device that can be incorporated in other equipment (see Col. 4, lines 48 - 55). Referring to Figs. 2 and 4, Harkin's sensing device comprises a sensing element array having row address conductors 18 (i.e., "X scanning electrode lines") and column address conductors 20 (i.e., "Y scanning electrode lines"). Row address conductors 18 and column address conductors 20 are each connected at an intersection by a sensing element 12 (see Col. 5, lines 13 - 19) and 24 - 31). Per Harkin, the sensing element array has a high-resolution region 14 for sensing fingerprint patterns and a low-resolution region 15 for sensing other, generally large, hand biometric characteristics such as finger length and/or width (see Col. 4, lines 55 - 67 and Col. 5, lines 1 - 3). Harkin discloses that the capacitances of electrodes 17 in region 14 depend on the spacing of the immediately overlying finger's ridges and troughs (see Col. 5, lines 36 - 42).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify BIRAM 203 of Murphy and Takahashi as taught by Harkin because Harkin's fingerprint sensor device is able to sense different hand biometric characteristics while using only a single sensing element array, thus simplifying manufacture while reducing the overall effective error rate (see Harkin, Col. 2, lines 9 - 30).

16. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,111,977 (Scott et al.) in view of U.S. Patent No. 5,172,785 (Takahashi) and U.S. Patent No. 6,225,890 (Murphy).

Scott's method of controlling access to a vehicle comprises the steps of: (a) placing a finger on a fingerprint sensor module of a remote control module, (b) transmitting minutiae

data of the fingerprint to a receiver mounted in the vehicle, (c) comparing the minutiae data to data stored in a database of registered drivers, and (d) conditioning the vehicle to unlock the door and ignition switch upon a match of the minutiae data to data stored in the database of registered drivers (see Col. 2, lines 16 - 39). Scott is silent on the step of limiting vehicular speed in accordance with a driver's updateable specific information that is stored in a database, wherein the limiting is in accordance with personal characteristics of the drivers instead of individually set conditions of use.

In an analogous art, Murphy's vehicle control system is able to restricting use of a vehicle based on a driver's personal characteristics in addition to identification data (see Col. 3, lines 21 - 47 and Col. 8, lines 54 - 61). As shown in Fig. 7, Murphy's system comprises: (a) biometric indicium receiving and analysis mechanism (BIRAM) 203, which receives a fingerprint from a vehicle operator (see Col. 4, lines 39 - 52; Col. 13, lines 33 - 41; and Col. 15, lines 11 - 15); (b) controller 209 or fingerprint matching unit for matching the presented fingerprint with the identities and registered fingerprint data of one or more authorized drivers (see Col. 13, lines 36 - 41 and Col. 15, lines 15 - 21); (c) a memory unit within controller 209 for containing a database of the identities and registered fingerprint data (see Col. 15, lines 15 - 21 and 66 - 67;and Col. 16, lines 1 - 11); and (d) token receiving and analysis mechanism (TRAM) 205 for receiving a token or smart card presented by a would-be driver (see Col.6, lines 55 - 62; Col. 7, lines 1 - 14; Col. 14, lines 46 - 54; and Col. 15, lines 11 - 15 and 60 - 65). Murphy discloses that a data transfer module 221 is used to add additional people to the database of authorized drivers and that each authorized driver periodically re-enters a fingerprint sample into the system in order to compensate for the tendency of biometric indicium to change with the passage of time (see Col. 6, lines 49 - 54 and Col. 15, lines 55 - 65), thus implying that

fingerprint data stored in controller 209's memory unit is associated with updateable user-specific information. Murphy also teaches that controller 209 determines if any control action(s), such as reducing vehicle speed to a selected speed range, are to be imposed on vehicle based on user-specific information corresponding to the presented fingerprint (see Col. 5, lines 29 - 54; Col. 15, lines 21 - 31 and 37 - 42; and Col. 17, lines 3 - 13). Murphy's controller 209, however, is unable to automatically control operation of the vehicle based simply on personal characteristics, such as age.

In an analogous art, Takahashi teaches a vehicle control system that is adjustable based on a driver's age and driving characteristics (see Abstract). As shown in Fig. 14, which is a schematic view of Takahashi's accelerator control system, Takahashi's system comprises: (a) card reader 8 for receiving integrated circuit (IC) card 8a; and (b) driver's accelerating characteristic estimator 35 or control mechanism for controlling operation of a vehicle based on the driver's age read from IC card 8a and inputs from components 8 -11 and 26 (see Col. 10, lines 64 - 68 and Col. 11, lines 1 - 23). Per Takahashi, the controlling mechanism produces a vehicle control signal according to a predetermined control characteristic, estimates a driver's characteristic from a signal supplied from the sensing means (i.e., components 8 - 11 and 26), and adjusts the control characteristic in accordance with the driver's age (see Col. 2, lines 6 - 25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Scott's method as taught by Murphy and Takahashi because (1) a database containing updateable specific information, such as personal characteristics, for each authorized driver enhances safety and security by ensuring that limitations on speed, driving routes, times of operation, etc. are established for restricted drivers (see Murphy, Col. 1, lines 66 - 67 and Col. 2, lines 1 - 13) and (2) a control system that is able to automatically impose

limitations on the vehicle based on a driver's personal characteristics enhances safety and ensures proper vehicle control performance particularly for the aged (see Takahashi, Col. 1, lines 33 - 49).

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clara Yang whose telephone number is (703) 305-4086. The examiner can normally be reached on 8:30 AM - 7:00 PM, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (703) 305-4704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CY
2 February 2004

BRIAN ZIMMERMAN
PRIMARY EXAMINER